CHAPTER IV

ISSUES IN FORMULATING A MILESTONE BUDGET PLAN

If the Congress should choose to establish milestone budgeting for weapons acquisition programs, it would have to decide on a number of important issues which fall into two basic categories: those concerning the scope of application of milestone budgeting and those regarding the process of implementation. This chapter considers these issues and concludes with a discussion of the current status of milestone budgeting and possible directions the Congress could take.

ISSUES OF SCOPE

The success of milestone budgeting in ensuring program stability and achieving savings and other benefits depends heavily on the scope of its application. Three major issues concerning applicability should be addressed: the number and type of programs to which milestone budgeting would apply, the acquisition milestones involved, and the length of time covered by a milestone budget.

Number and Type of Programs

In general, the greater the number of acquisition programs to which milestone budgeting is applied, the greater its potential benefits will be. On the other hand, as the analysis in Chapter III indicated, broad application of milestone budgeting could decrease budget flexibility and increase budget variability, perhaps beyond acceptable levels. Ultimately, a plan for milestone budgeting should try to maximize net benefits while minimizing potential costs. The number of programs using this approach is a critical variable in achieving this goal. The following discussion outlines possible alternatives for selecting the number of programs to be covered.

One option would apply milestone budgeting to all programs that the Department of Defense defines as "major." Major acquisition programs are designated by the Secretary of Defense and are reviewed at acquisition milestones by the Defense Acquisition Board (DAB). Programs are usually designated as major if they exceed $200 million in research and development

funds or $1 billion in production funds (both in 1980 dollars). Joint service programs or international cooperative programs may also be designated as major. 1/ Currently, 53 major programs are subject to milestone review by the DAB (see Appendix B). Historically, these major programs account for about half of all defense procurement funds and 15 percent of the R&D budget each year.

Applying milestone budgeting to all major programs managed by the DAB should yield costs, benefits, and risks similar to those outlined in Chapters II and III. Thus, for example, the number of program changes could be significantly reduced, but there would also be less flexibility to modify the budget in response to changes in fiscal policy.

Alternatively, milestone budgeting could be applied only to high-priority, major programs based on criteria set by the Administration and reviewed by the Congress. While this approach could reduce the benefits, it could also substantially reduce the risks of milestone budgeting. For example, milestone budgeting could be limited to those programs that meet two tests: reasonable agreement within the military services about system requirements and relatively low risk of expensive technical problems. A third criterion--limiting the milestone approach to smaller major programs--could be added if the Administration or the Congress were concerned about less budget flexibility caused by putting large, major programs off limits during periods of budget reductions.

Rather than limiting the number of programs to be managed under milestone budgeting, last year's legislation establishing a test of milestone budgeting implied that the Congress might eventually apply it to all defense programs whether major or minor. Universal application of milestone budgeting might offer greater potential benefits than a program limited to major programs, but it would also create significant problems. Today DoD manages about 2,000 programs on a milestone basis. 2/ Placing all these programs under milestone budgeting would greatly increase the difficulty of managing the Congressional workload. It might also require significant changes in current DoD practices, since many minor programs consist of a number of projects that are each managed according to different milestone schedules. If the Congress wished to extend the benefits of milestone bud-

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1. Some weapon programs that exceed the normal thresholds of major program costs are not designated as major and are not managed through the DAB acquisition milestone process. Typically, these have included major ship types and classified programs.

2. These include about 160 major programs and 1,840 minor programs.

geting beyond major programs managed by the DAB, it would probably be most sensible to select only a few of the minor programs that are felt to be of high priority rather than to attempt to apply milestone budgeting universally.

Selection of Milestones

In addition to deciding which programs to cover under milestone budgeting, the Congress must also consider which milestones to include under this new procedure. Milestone budgeting could apply to all major acquisition milestones beginning with the approval of a new program through the authorization of full production. The choice may depend on the risks and benefits at each milestone.

Early Acquisition Milestones (Milestones 0 and I). The two early milestones in the life of a weapons system are the approval of a justification for the start of a program (Milestone 0) and approval of funds to demonstrate and validate the technological concept for an approved system (Milestone I). The risks associated with milestone budgeting for these early stages are modest. In general, it is unlikely that, under a milestone budgeting approach, programs would breach baseline thresholds during these early acquisition stages. The first acquisition phase is essentially a stage in which program plans are established and paper studies of system feasibility are conducted. Contractors can usually adhere to funding limits and schedules during this initial acquisition phase.

The risk that a program might breach a baseline threshold is higher following Milestone I, however, than for the initial concept exploration phase following Milestone 0. Efforts to demonstrate the concept for a weapons system following Milestone I often necessitate building experimental prototypes. Particularly for high technology systems, technical problems, both foreseen and unanticipated, are initially encountered during this process. Such problems, if significant, might generate cost and schedule threshold breaches that would require revision of a program baseline.

Budget reductions to infant programs also generate changes and delays that could breach baseline thresholds. Milestone budgeting could avoid such problems at relatively low cost by ensuring budget stability during these initial acquisition phases. Since program costs for infant programs are relatively small, milestone budgeting would not significantly restrict Congressional flexibility to make other budgetary adjustments within the R&D appropriations.

Full-Scale Development (Milestone II). After a program demonstrates that its requirements, technology, and system concept are valid, it may be approved for full-scale development at Milestone II. During this stage, a contractor builds and tests a prototype of the system. The Packard Commission endorsed milestone budgeting for use during this critical acquisition phase.

During full-scale development, the potential benefits of milestone budgeting are substantial. This stage usually lasts about five years for major weapons and involves significant expenditures. Program delays because of funding reductions, which the analysis in Chapter II suggests are common, result in added costs and adverse effects on military capability. These adverse effects are important because, by the time of full-scale development, the weapons systems are anticipated in DoD's force planning.

The potential costs of milestone budgeting used during full-scale development, however, can also be significant. Program costs are usually much greater for full-scale development than for earlier acquisition phases and could restrict budget flexiblity to a greater degree, particularly if many full-scale development programs are under milestone budgeting. For example, full-scale development of the C-17 is estimated to cost about $2.7 billion, while the pre-Milestone II costs totaled about $200 million (both in fiscal year 1981 dollars).

Substantial technical risks to baseline thresholds also exist during full-scale development. Indeed, the risk that thresholds may be breached is probably greatest during this acquisition phase when a working prototype must be built. If technical problems develop, then milestone budgets may have to be revised and program stability could be lost. Technical risks may be particularly great if programs proceed directly from Milestone 0 to Milestone II without demonstrating and validating a system concept.

Steps have been taken in recent years, however, to reduce cost and technical risks during full-scale development. For example, the fiscal year 1984 Defense Authorization Act requires that DoD complete an independent cost estimate--that is, one done by cost experts who have no involvement in the project--before a program can be authorized to enter full-scale development. Also, recent DoD acquisition policy encourages early prototype production and testing to reduce program risk during full-scale development. Milestone budgeting would reinforce the thrust of these policies by providing an incentive to establish low-risk projections as baseline estimates.

Production (Milestone III). Weapons systems are approved for production at Milestone III. For some systems, this approval takes place in two steps:

approval of initial, low-rate production (Milestone IIIA) and approval of full-rate production (Milestone IIIB). The Packard Commission endorsed the use of milestone budgeting for both stages. 3/

The potential benefits of milestone budgeting may be most visible during production. Delays are common at this stage, often because of budget limits. CBO recently reviewed the production of 40 major weapons systems. 4/ Compared with plans established in 1983, production from 1983 through 1987 averaged about 85 percent of plans and, for many systems, amounted to two-thirds or less of plans. These slowdowns or "stretchouts" of production occurred even though funding for the Department of Defense increased in real terms during three of the five years from 1983 through 1987. If milestone budgeting could avoid such stretchouts, systems would be available sooner and cost less per unit.

On the other hand, the problems associated with milestone budgeting for systems in production could be substantial. Costs are large, which means that flexibility to adjust budgets could be significantly impaired. For example, if a milestone budget had been authorized for full-scale development of the F-16 from 1975 through 1979, the Congress would have authorized $828 million; a milestone authorization for a similar period for initial production of this system (1977 through 1981) would have cost $6.6 billion.

Moreover, significant technological risks may exist for programs even though they are in production. For many, if not most programs, initial production begins before the testing of a system is complete. As a result, technical problems often arise that may require major adjustments in production or even in design. These risks are particularly evident for systems entering initial production (Milestone IIIA). Generally, weapons systems that enter full-rate production (Milestone IIIB) have experienced a greater degree of testing.

Moreover, program risk has also been reduced through a number of acquisition policies recently implemented. For example, the fiscal year

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3. The Packard Commission endorsed milestone budgeting for initial production as a part of the Milestone II decision.

4. Statement by Robert F. Hale, Assistant Director, Congressional Budget Office, before the Senate Armed Services Committee, Subcommittee on Conventional Forces and Alliance Defense and Subcommittee on Defense Industry and Technology, March 17, 1987.

1984 Defense Authorization Act prescribes that the Director of Operational Test and Evaluation must certify to the Congress that a system has successfully passed operational testing (during which systems off assembly lines are tested by officer and enlisted personnel under normal operating conditions) before full production can be authorized. In addition, for major programs managed at the service level, full production cannot be authorized unless program baseline objectives established at Milestone II have been met.

Whether to apply milestone budgeting at a particular milestone--I, II, or III--requires weighing of risks and benefits that vary at each stage and for each weapons system. Thus, the Congress may wish to make milestone budgeting available for all milestones and then decide which programs to include based on the characteristics of the individual system.

Period of a Milestone Budget

Yet another of the choices in specifying a system of milestone budgeting concerns the period covered by the budget. The Congress could approve a program at its milestone and provide funds intended to last until the next milestone or the completion of production. Alternatively, the Congress could approve a program at one milestone but provide funds only for a certain number of years. One version of this approach would provide funds for two years, consistent with the two-year budgeting approach that the DoD has proposed for its entire budget.

In general, the longer the period of coverage, the greater the potential benefits but also the greater the potential problems. Ensuring budget stability for an extended period can both generate savings through management efficiencies and avoid costs associated with program changes. In addition, the workload accompanying project reviews--both in the Administration and in the Congress--is less the longer the period of the milestone budget, as the analysis in Chapter II demonstrates.

On the other hand, a long period of coverage could mean that more dollars went to programs not subject to review in a particular year which would limit flexibility to alter budgets. For example, the analysis in Chapter III points out that, under the most restrictive circumstances of a five-year milestone budgeting system applied to all major programs, about 60 percent of the procurement budget and 75 percent of the research budget would be subject to change in a particular year. With two-year milestone budgets that same system would leave 75 percent and 85 percent, respectively, subject to change.

Longer periods for milestone budgeting could also exacerbate the problem of budget variability if a lump-sum funding approach were adopted. The longer the milestone period, the greater the single-time funding required. Analysis contained in Chapter III illustrates the degree of possible variation and demonstrates that five-year milestone budgeting coupled with lump-sum funding could cause substantial variation from budgets that change incrementally from one year to the next.

Finally, programs are more likely to exceed projected budgets or other thresholds under a milestone process with long periods. This result would be particularly true for high-technology programs or for those in full-scale development or early stages of production. Therefore, as with the choice of milestones to be covered, the Congress may want to approve the concept of milestone budgeting and then choose the period of the milestone budget based on the characteristics of individual systems.

ISSUES OF PROCESS

The Congress must decide not only the scope of any milestone budgeting process, but also how to implement the process itself. Major issues concern whether budgets should be authorized only or authorized and appropriated, and whether multiyear funding should be approved in one lump sum or allocated in annual amounts. The rapidity of the transition to a milestone system, the timing of events within a new budget process, and information requirements are also issues that would require close attention and coordination.

Authorization and Appropriation

The Congress must decide whether milestone budgets should be only authorized or whether they should be both authorized and appropriated. In its current two-step process for dealing with the details of the defense budget, the Congress first authorizes defense spending (thus setting overall defense policy and limits on how many weapons can be bought) and then appropriates funds (actually making available the money to carry out the policy). Maximum benefits of milestone budgeting would be gained if both authorization and appropriation of funds were accomplished on a milestone basis. Under this approach, funding stability would be assured since program managers would have both the policy direction and the funds to proceed with a program during the milestone period. Moreover, the workload involved in program reviews would be reduced to the maximum extent possible.

On the other hand, the authorizing committees have shown the greaest interest in milestone budgeting; it was initially proposed by the Senate Armed Services Committee. Traditionally, the appropriating committees have been reluctant to appropriate funds for more than one year (although they have done so--to a limited extent--under multiyear contracting). Thus, it is possible that programs could receive milestone authorizations but still be subject to annual appropriations. This would increase the likelihood that annual program changes would continue to occur.

To assess the probability of program changes, CBO examined budget data for the period from 1982 through 1987 to determine how often significant adjustments from authorized levels were made during the appropriation process. For a sample of 344 opportunities for change to major R&D programs, appropriated funds differed from authorized amounts by greater than 10 percent in 78 cases (22.7 percent). Adjustments occurred with increasing frequency during the 1985-1987 period; 13.3 percent of major R&D programs were adjusted in 1985, 20.3 percent in 1986, and 34.7 percent in 1987. These data suggest that a significant risk exists that major R&D programs authorized for milestone funding would continue to experience adjustments during annual appropriation reviews.

Other budget data indicate that the risk of changes may be only slightly lower for production programs. Appropriated funds for a sample of 339 opportunities for change to production programs differed from authorized levels by greater than 10 percent in 70 cases (20.6 percent) from 1982 through 1987. The trend in the frequency of adjustment for production programs during the 1985-1987 period has been downward. Adjustments occurred in 22.2 percent of the cases in 1985; 21.2 percent in 1986; and 14.9 percent in 1987. Nevertheless, these percentages still suggest that there is a significant risk that budget adjustments that could compromise program stability could occur if appropriation reviews continue to be conducted annually.

One way to reduce the risk would be to limit the scope of milestone budgets to the largest acquisition programs. A review of budget data for the 20 most expensive R&D programs indicates that authorized funds were adjusted by greater than 10 percent in 18 of 105 opportunities for change (17.1 percent) during the 1982-1987 period. This result is modestly lower than the 22.7 percent of cases that received budget adjustments for the larger sample of major R&D programs. Moreover, the 15 most expensive production programs were adjusted significantly less frequently during the 1982-1987 period than the larger sample of major programs. Authorized funds were adjusted by greater than 10 percent for the 15 programs in 7 of 77 cases (9.1 percent) compared with 20.7 percent for the larger sample.

It is possible, of course, that programs could be authorized for the period of their milestones, but appropriated annually, and still avoid the substantial numbers of changes suggested by this historical data. The appropriation committees might be less likely to alter programs that have received a long-term authorization under a milestone approach, especially if there were relatively few programs under milestone budgets. But, if milestone budgeting is applied to a large number of DoD programs, and if history is a guide, authorization without appropriation might not achieve the desired program stability. Thus, this decision may be the most important among those the Congress must make if it chooses to implement milestone budgeting.

Manner of Funding

The Congress must also decide whether to provide funding for milestone programs on a lump-sum or annual basis. Lump-sum funding would maximize management flexibility and so might give DoD the greatest chance to administer programs effectively. But it could also increase the variability of budgets if several large programs received lump sums in one year. Chapter III analyzed the degree of potential variability, concluding that it could be substantial, especially under the five-year version of milestone budgeting. If the Congress elected lump-sum funding, it could also "squeeze" funding for programs not under milestone budgeting if efforts were made to reduce budget variability by cutting funds for nonmilestone programs.

Timing and Information

The Department of Defense may have to revise the timing of its milestone reviews under a program of milestone budgeting. Currently, milestone reviews in DoD proceed independently of the budget cycle. For example, DoD's budget process might approve a request for funds for full-scale development before, or after, the Milestone II review that approves full-scale development. Of course, budget approval and milestone approval must both be completed before any contracts are executed. But DoD probably would have to complete its milestone review of a program before the Congressional review leading to a milestone budget, since the data and recommendations made by the department would presumably be the basis for Congressional action. This would probably not present problems for most programs, although some schedules might have to be revised to avoid waiting months for the Congressional milestone review.

Similarly, DoD may have to provide the Congress with additional information about milestone programs. DoD already provides (with in documents such as the *Selected Acquisition Reports*) considerable detail on year-by-year costs and schedules for major programs. If, however, the Congress decided to link approval of milestone budgets to selected performance projections--for example, development of an aircraft with certain speeds or ranges--then additional data on specific performance projections might be needed. In addition, if the Congress decided that some nonmajor programs were to be included under milestone budgets, it might require additional data on cost, schedule, and performance projections.

Transition

If the Congress decides to carry out milestone budgeting and resolves the issues of scope and process discussed above, it must decide how quickly to move toward milestone budgeting. The most gradual approach to the transition would be to apply milestone budgeting to new programs as they reach applicable milestones. Restricting milestone budgeting to new programs would establish a clear set of management and oversight expectations at the outset of a program's acquisition process. In addition, this approach would involve minimal near-term budgetary commitment and loss of budgetary flexibility.

A more rapid transition could be obtained by applying milestone budgeting to existing programs as they reach applicable acquisition milestones. This approach would probably require larger near-term budget commitment and greater loss of budget flexibility than milestone budgeting restricted to new programs. On the other hand, it would be consistent with the Defense Enterprise Program test recently legislated by the Congress, which proposed milestone authorizations for existing programs entering or already in full-scale development or production. Nor should this approach overwhelm the Congress. Assume, for example, that milestone budgeting were applied to Milestones II and III for major programs beginning in 1989. According to current schedules for major programs, DoD would request milestone budgets in 1989 for two full-scale development programs and five production programs. 5/

5. The development programs are the Anti-Armor Weapons System and Fixed Distribution System. The production programs are NAVSTAR User Equipment, the V-22 aircraft, the Submarine Advanced Combat System, the Army Tactical Missiles System, and the Inter-Service/Agency Automated Message Processing Exchange.

The most rapid transition to milestone budgeting would be achieved by initiating milestone authorizations for all designated major or minor programs whether or not they are at a milestone. This approach would probably not be practical, however, because it could involve approving milestone budgets for hundreds of programs in the first year.

ACTION TO DATE AND FUTURE STEPS

The Congress authorized a test of milestone budgeting in the 1987 Defense Authorization Act, labeling the test programs the Defense Enterprise Programs (DEP). Defense Enterprise Programs may include "any defense acquisition programs" designated by the secretaries of the armed services for streamlined management procedures specified in the legislation. The Secretary of Defense was directed by the act to designate "not less than three Defense Enterprise Programs to be considered for milestone authorization" in conjunction with submission of the 1988-1989 DoD budget request. The designated milestone authorization candidates must either be in, or ready to enter into, full-scale engineering development or full-rate production. The legislation also directed DoD to request the Congress to authorize funds in "a single amount sufficient to carry out that stage, but not for a period in excess of five years."

The Authorization Act also required DoD to submit program baseline descriptions to the Congress for milestone candidates and, for approved milestone programs, to report program deviations from the baseline to the Congress as they occur. In the event that a program breaches a baseline threshold, the Secretary of Defense is authorized to convene a program review and to submit to the Congress a revised baseline description and program recommendations. The legislation also restricts the obligation of funds in the event that a baseline deviation is not reported to the Congress within a designated time period.

The Secretary of Defense has requested the Congress to authorize milestone budgets for three DEPs designated in the 1988-1989 budget. These include the Navy's Trident II (D-5) missile system, the Army's Mobile Subscriber Equipment (MSE) program, and the Medium Launch Vehicle (MLV) system of the Air Force.

If the Congress authorizes milestone funding for the three candidate programs, the loss of budget flexibility would be minimal since there are few programs entering the system. Moreover, DoD has requested milestone funding on an annual, rather than a lump-sum basis. Procurement funds

requested for milestone candidates total $3.5 billion for 1988, or 4.1 percent of the total procurement authorization request. Total procurement authorization requested for milestone candidates during the 1988-1992 period is $14.8 billion, or 3 percent of the procurement budget projected by DoD for the five-year period. The $1.1 billion requested for research and development of the Trident D-5 missile in 1988 represents 2.5 percent of the total R&D authorization request. The total D-5 missile R&D costs of $2.3 billion from 1988 through 1992 constitute 1.1 percent of the total R&D budget projected for the period.

The Authorization Act also required DoD to submit complete baseline descriptions of the milestone candidate programs to the Congress by June 30, 1987. Since the legislation does not require the appropriation of funds on a milestone basis, the DoD will continue to submit supporting budget documentation for milestone programs each year to meet the requirements of the annual appropriation budget review.

The 1987 Authorization Act contains no provisions for how to proceed with milestone budgeting beyond the initial test. Before the Congress decides to expand its use, however, it is essential to evaluate the test results. Since the budgets for the initial milestone programs will not be completed until the 1991-1992 budget years, an assessment of their effectiveness could wait until then. Alternatively, the Congress could continue to approve a few more programs each year for milestone budgeting while monitoring progress of the milestone system each year. During this test period, the Congress could also consider and resolve the issues of scope and process discussed in earlier sections of this chapter through hearings and additional legislation.

APPENDIXES

APPENDIX A

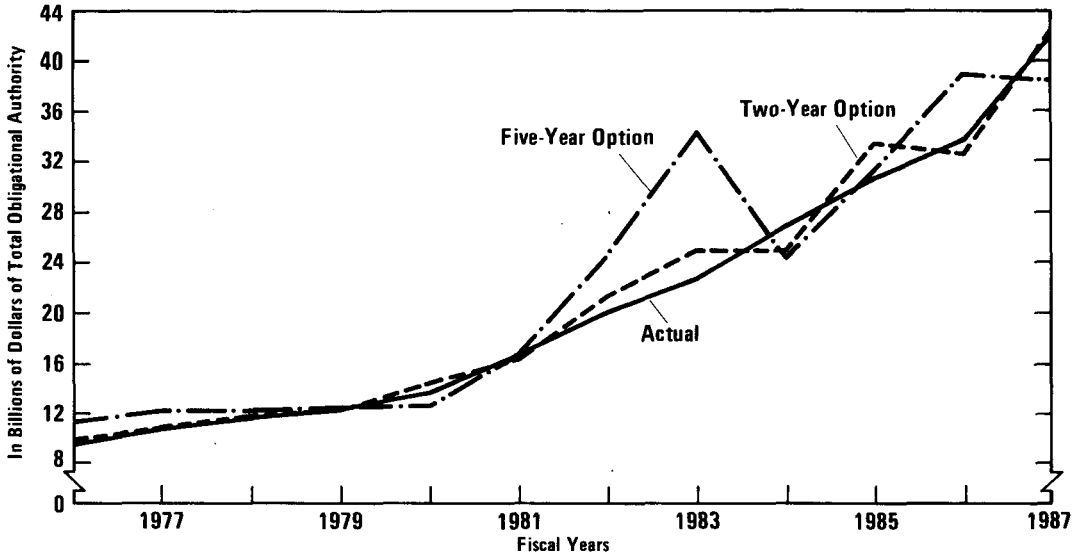
EFFECTS OF LUMP-SUM FUNDING

Under milestone budgeting, the effects of lump-sum funding are more pronounced if the research and development (R&D) and procurement budgets are examined separately. The variance is less obvious when analyzed in the context of the total Department of Defense (DoD) budget, since much of that budget--roughly half that devoted to operating costs plus nonmajor programs--is assumed to remain under annual funding.

Figures A-1 and A-2 depict the variance from actual appropriated funds for R&D and procurement that could have occurred under lump-sum funding during the fiscal years 1976-1987 period. The average variances for the two milestone budgeting options for these appropriations would exceed those of the DoD budget as a whole. For example, for the two-year option, the average variance from the actual R&D appropriation over the 1976-1987 period would be 2.4 percent; for procurement, 3.5 percent; and for the total DoD budget, 1.3 percent. For the five-year option, the level of variance would average 10.1 percent for R&D, 15.8 percent for procurement, and 5.3 percent for the total DoD budget.

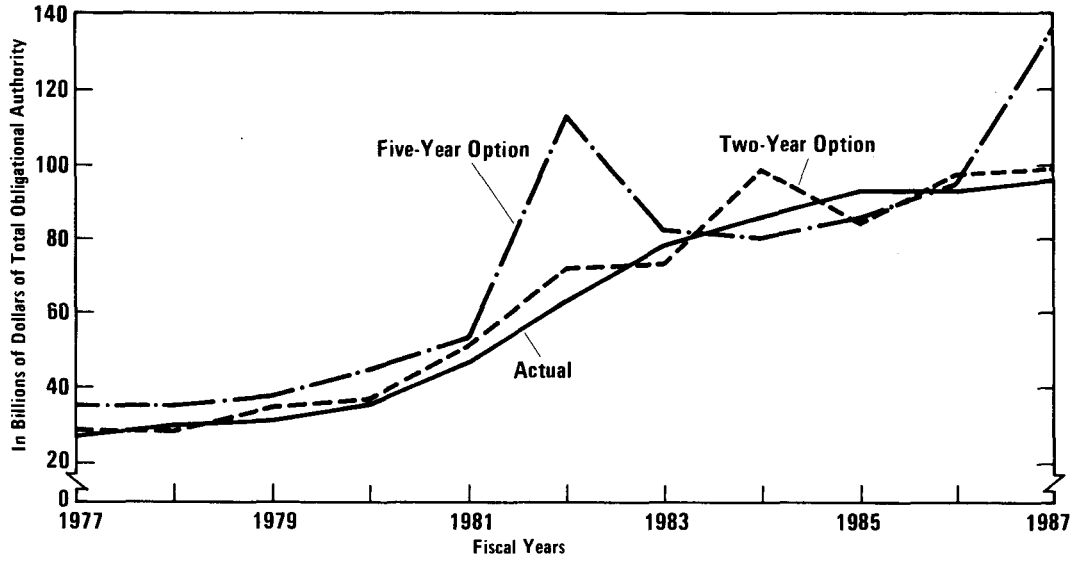
The range of variances from actual funding for R&D and procurement would also exceed those for milestone options applied to the DoD budget as a whole. For research and development, the range of variance for the two-year option would extend from -7.6 percent of actual funding to +8.5 percent and for the five-year option, from -10.7 percent to +49.6 percent. For procurement, the variance would range between -10.4 percent and +14.2 percent for the two-year option and between -9.5 percent and +77.5 percent for the five-year option. For the total DoD budget, variance for the two-year option would range from -2.2 percent to +4.6 percent; for the five-year option, from -3.2 percent to +25.4 percent.

Figure A-1.
R&D Budget Variability Under Two Milestone Options



SOURCE: Department of Defense, *Selected Acquisition Reports* (December 1985).

Figure A-2.
Production Budget Variability Under Two Milestone Options



SOURCE: Department of Defense, *Selected Acquisition Reports* (December 1985).

APPENDIX B

MAJOR WEAPONS SYSTEMS SUBJECT TO REVIEW BY DEFENSE ACQUISITION BOARD

The following list identifies the major weapons systems subject to review by the Defense Acquisition Board as of February 1987:

Advanced Target Acquisition Radar System (ATARS)
Advanced Air-to-Air Missile (AAAM)
Advanced Anti-Armor Weapons System-Heavy (AAWS-H)
Advanced Tactical Fighter (ATF)
Advanced Medium-Range Air-to-Air Missile (AMRAAM)
Advanced Anti-Armor Weapons System-Medium (AAWS-M)
Advanced Interdiction Weapons System (AIWS)
Air Defense Initiative (ADI)
Airborne Self-Protection Jammer (ASPJ)
AN/SQQ-89 Antisubmarine Warfare System
Antitactical Missile (ATM)
Armored Family Vehicles (AFV)
Army Tactical Missile System (ATACMS)
C-17 Transport Aircraft
Combat Identification System (Mark XV)
Family Medium Tactical Vehicles (FMTV)
Family Heavy Tactical Vehicles (FHTV)
Fixed Distribution System (FDS)
Forward Area Air Defense System (FAADS)
High Frequency Anti-Jammer (HFAJ)
High-Speed Anti-Radiation Missile (HARM)
Improved Strategic Communications
Integrated-Service/Agency Automated Message Processing Exchange (I-S/A AMPE)
Joint Tactical Information Distribution System (JTIDS)
LHX Helicopter
M1A1 Main Battle Tank
Medium Surface-to-Air Missile (MSAM)
Medium Launch System (MLS)
Minuteman III Penetration Aids
MK-50 Torpedo
Multiple Launch Rocket System Terminally Guided Warhead (MLRS-TGW)
NATO Anti-Air Warfare Combat System
Naval Airship

NAVSTAR User Equipment
P-3G Aircraft
Remotely Piloted Vehicle (RPV) (AQUILA)
Sea Lance (ASW/SOW)
Search and Destroy Armor (SADARM)
SH-60F (Inner-Zone Anti-Submarine Warfare Helicopter)
Short-Range Attack Missile II (SRAM II)
Single Channel Ground Air Radio System (SINCGARS)
Small Missile (SICBM)
Space Defense (ASAT)
SSN-21 Submarine
SSN-21 Combat System
Submarine Advanced Combat System (SUBACS) (AN/BSY-1)
T-45 Training Aircraft
Tacit Rainbow (Classified Program)
Trident II Missile (D-5)
V-22 (JVX) Aircraft
V-22 Aircraft (Anti-Submarine Warfare Variant)
Worldwide Airborne Command Post (WWABNCP)
Worldwide Information System (WIS)